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APPLICATION NO.	FILING DATE.	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/687,157	10/16/2003	Marcus Paul Grun	PO7954/LeA 36,268	7896

157 7590 09/20/2005

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EXAMINER	
MANOHARAN, VIRGINIA	

ART UNIT	PAPER NUMBER
1764	

DATE MAILED: 09/20/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/687,157	GRUN ET AL.	
	Examiner	Art Unit	
	Virginia Manoharan	1764	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *25 March 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-10* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-10* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

The abstract of the disclosure is objected to because of the inclusion of legal phraseology often used in patent in the claims such as "comprising", e.g., in lines 2, 4, 6, 8 and 13. Correction is required. See MPEP § 608.01(b).

The specification had not been checked to the extent necessary to determine the presence of all possible minor errors e.g., typographical, grammar, idiomatic, syntax and etc. Applicants' cooperations are requested in correcting any errors of which applicants may become aware in the specification.

Claims 1-10 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

(a) The following claimed languages lack proper antecedent supports in the claims.

(1) The claimed "Chlorinated aromatic hydrocarbons" and "hydrolyzable chlorine" in claims 5 and 10 were not initially recited in the base claims 1 and 6 respectively.

(2) The claimed "the solvent" and "the reaction residue" in claim 6.

(b),The term "if" in claim 6, line 4 is an indefinite term.

©. The claimed "40 ppm by weight of acidity" in claims 5 and 10 is not understood. The "acidity" should be –acid(s)---?

(d). It is unclear whether the "a high boiler" e.g., in claim 4 is the same or different from the initially recited "a high boiler" in claim 1, line 13. The article –the—should replace –"a" in the former recitation to obviate this rejection. [Applicants should further check that the article –the—should be inserted whenever or wherever appropriate in the claims].

e). It is not seen what happen to phosgene in the feed as it is not mention being in the product?

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington,* 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1-10 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-5 of U.S. Patent No. 6,803,483. Although the conflicting claims are not identical, they are not patentably distinct from each other because the subject matter of the instant claims is covered in the claims of the above patent. The difference seen, is that the process of the instant claims fractionate the feed in a divided –wall distillation column as opposed to fractionating the feed in a heat integrated system comprising an upstream distillation

column , an interchanger and a downstream distillation column as claimed in the above patent. However, said difference is deemed not to constitute a patentable distinction inasmuch as the structural limitation in the method/ process claim is of no patentable moment unless it can be shown that the structure affects the process/ method in a manipulative sense. It is noteworthy that the same products P1-P-4 are obtained in both fractionation processes.

Claims 1-10 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 2-10 of copending Application No. 10/457307. Although the conflicting claims are not identical, they are not patentably distinct from each other because the subject matter of the instant claims is covered in the claims of the above co-pending application, and vice versa. This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Claims 1-10 rejected under the judicially created doctrine of double patenting over claim1-5 of U. S. Patent No. 6,803,483 since the claims, if allowed, would improperly extend the "right to exclude" already granted in the patent.

The subject matter claimed in the instant application is fully disclosed in the patent and is covered by the patent since the patent and the application are claiming common subject matter, as follows: : a process for the production of toluenediisocyanate comprising the steps, interalia, of separating the crude distillation feed comprising toluene-diisocyanate, an organic solvent and less than 2% by weight phosgene in a distillation column into at least four product fractions P1 - P4.

Claims 1-10 are provisionally rejected under the judicially created doctrine of double patenting over claims 2-10 of copending Application No. 10/457,307. This is a provisional double patenting rejection since the conflicting claims have not yet been patented.

The subject matter claimed in the instant application is fully disclosed in the referenced copending application and would be covered by any patent granted on that copending application since the referenced copending application and the instant application are claiming common subject matter, as indicated supra.

Furthermore, there is no apparent reason why applicant would be prevented from presenting claims corresponding to those of the instant application in the other copending application. See *In re Schneller*, 397 F.2d 350, 158 USPQ 210 (CCPA 1968). See also MPEP § 804.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1 –10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicants' Disclosure of Admitted Prior Art or Hetzel et al (4,076,577) that in view of WO 011 8570508 or US 2,471,134 to Wright.

Applicants admit that at page 5-lines 1-25 that" From Chem. System's PERP Report for TDI/MDI (Chem. Systems, Process Evaluation Research Planning TDI/MDI

98/99S8. Tarrytown, NY, USA: Chem. Systems, 1999, pp 27-32) for TDI/MDI it can be learned, that the fractionation of a crude TDI distillation feed product can be completed in the following manner. Normally, the liquid product from the dephosgenation stages is sent to a preevaporator, which produces a residue-rich liquid phase as a bottom product and a vapor-phase product containing mainly solvent and isocyanate as an overhead product. The bottom product from the pre-evaporation is sent to a process for the removal of volatile compounds from the pre-evaporation is sent to a process for the removal of volatile compounds from the reaction residues (residues removal). The volatile components removed in the residue removal stage as well as the vapor-phase product from the pre-evaporator are sent to a solvent column, where an initial separation of the isocyanate from solvent is completed as well as the removal of any remaining phosgene. The resulting products are a phosgene-enriched top product, a relatively pure solvent stream as an intermediate product and an isocyanate-enriched bottoms product. See also Hetzel's disclosure at col. 4, lines 6-49 rendering obvious the claimed invention.

The process admitted to be known by applicants or Hetzel differs from the claimed invention in that claims 1 & 6, for example, both recite that the process for the purification of toluenediisocyanate, and the process of separating the crude distillation feed comprising toluene diisocyanate, an organic solvent and less than 2% by weight phosgene claims in a dividing-wall distillation column".

However, the WO '708 suggests employing array of distillation columns containing at least one dividing wall column for continuous distillation for separation of

the feed mixtures. Note also Wright "134, which discloses the use of a dividing wall column.

To use the well-known dividing well column to the process admitted to be known by applicants or Hetzel would have been obvious to one of ordinary skill is the art for the advantages derived from its used as noted e.g., at col. 1, lines 16-21 of the Wright's reference.

The percentages by weights e.g., "The less than 2% by weight" in claims 1-2 the concentration in claims 4-6. Note further claims 3, 5 & 9 are deemed to be result – effective variables which ordinary are within the skill of the art.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

(a) Sauer et al and Denton et al both disclose a process for the preparation or separation of organic isocyanates.

(b) Schnabel discloses the distillation of an isocyanates containing compound.

(c) Ewald discloses a method and apparatus for preparation of organic isocyanates by the phosgenation of the corresponding amine.

(d) Rust et al discloses the used of a dividing wall column.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Virginia Manoharan whose telephone number is (571) 272-1450.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenn Caldarola can be reached on (571) 272-1444. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

VIRGINIA MANOHARAN
PRIMARY EXAMINER
ART UNIT 133 1764
9/12/05